



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,977	10/03/2003	Dileep Sivasankaran	10030.000210 (GCI-002)	1564

31894 7590 08/20/2007
OKAMOTO & BENEDICTO, LLP
P.O. BOX 641330
SAN JOSE, CA 95164

EXAMINER

FAROUL, FARAH

ART UNIT	PAPER NUMBER
----------	--------------

2616

MAIL DATE	DELIVERY MODE
-----------	---------------

08/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

27

Office Action Summary	Application No. 10/678,977	Applicant(s) SIVASANKARAN ET AL.	
	Examiner Farah Faroul	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2007.
 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-16 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 02 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following Office Action is based on the amendment filed on August 2, 2007, having claims 1-16 and figures 1-3.

Drawings

2. The drawings were received on August 2, 2007. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Note: The phrase "link-loss-learn protocol" recited in claims 10, 12, 14 and 16, has been disclosed by applicant to define "upon detecting a link failure at the port of the switch, the MAC address table has been cleared". It is suggested that applicant clearly recite the definition in the claims, each time the phrase is recited, as the phrase is not known in the art.

Claims 1-4 and 7-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bare (US 2003/0016624 A1) in view of Bare (US 6,556,541 B1).

For claims 1, 10-11 and 14-15, Bare (624) discloses detecting a link failure at a port of the switch (paragraph 30, lines 1-11 wherein a link failure is detected at a port of the switch)

For claims 1, 10-11 and 14-15, Bare (624) discloses the entire claimed invention except for clearing all medium access control (MAC) address entries from a MAC address table of the switch in response to the link failure detection.

Bare (541), from the same or similar field of endeavor, teaches flushing its entire address tables in response to a link failure (column 42, lines 8-17).

Thus, it would have been obvious to someone of ordinary skill in the art to combine the load balancing method of Bare (541) with the communication network of Bare (624) at the time of the invention. The load balancing method of Bare (541) is implemented into the communication network of Bare (624) by flushing all of the entries in the address tables. The motivation to combine the load balancing method of Bare (541) with the communication network of Bare (624) is that it provides a rapid fault recovery mechanism.

For claim 2, Bare (624) discloses the address table causes discovery process to fill the table to begin immediately (paragraph 377, lines 1-10 wherein a discovery process to fill the table is disclosed)

For claims 3, 12 and 16, Bare (624) discloses momentarily dropping a link on another port of the switch (paragraph 359, lines 1-15 where the link is dropped on another port of the switch)

For claim 4, Bare (624) discloses momentarily dropping the link on the other port causes propagation of the link failure to next switch (paragraph 379, lines 1-11 wherein the link failure is propagated)

For claim 7, Bare (624) discloses momentarily dropping the link for a length of time sufficient for a next switch to detect the link drop (paragraph 205, lines 1-16 and table 5 wherein the link is dropped for a period of time)

For claims 13 and 14, Bare (624) discloses a multi-port Ethernet switch (paragraph 124, lines 1-7 wherein is disclosed a multi-port Ethernet switch)

4. For claims 8 and 9, Bare (624) and Bare (541) disclose the entire claimed invention except for the length of time is no more than fifty milliseconds and under ten milliseconds.

Thus, it would have been obvious to someone of ordinary skill in the art to add the values 50 ms and 10 ms to the time periods of the modified system Bare (624) and Bare (541) at the time of the invention. The values are added to the length of time of the modified system of Bare (624) and Bare (541) by modifying the time period to detect a link failure. The motivation to substitute these values into the modified system of Bare and Bare is that it provides an efficient method of fault recovery.

Art Unit: 2616

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bare (US 2003/0016624 A1) in view of Bare (US 6,556,541 B1) and further in view of Eisen et al. (US 2002/0129226 A1).

For claim 5, Bare (624) discloses overwriting each entry in the table (event 12 in figure 7 wherein an entry in the table is overwritten)

For claim 5, Bare (624) and Bare (541) disclose the entire claimed invention except overwriting with a template register.

Eisen, from the same or similar field of endeavor, teaches overwriting with a template register (paragraph 45, lines 1-20).

Thus, it would have been obvious to someone of ordinary skill in the art to combine the overwriting method of Eisen with the modified system of Bare (624) and Bare (541) at the time of the invention. The overwriting method of Eisen is implemented into the modified system of Bare (624) and Bare (541) by using a register to overwrite the entry in the table. The motivation to combine the overwriting method of Eisen with the modified system of Bare (624) and Bare (541) is that it provides an efficient fault recovery mechanism.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bare (US 2003/0016624 A1) in view of Bare (US 6,556,541 B1) and further in view of Tanoue (US 2003/0002462 A1).

For claim 6, Bare (624) and Bare (541) disclose the entire claimed invention except momentarily turning off power within the switch.

Tanoue, from the same or similar field of endeavor, teaches turning off a power within a device (paragraph 9, lines 12-32).

Thus, it would have been obvious to someone of ordinary skill in the art to combine the switch architecture of Tanoue with the modified system of Bare (624) and Bare (541) at the time of the invention. The turn-off power feature as taught by Tanoue is implemented into the modified system of Bare (624) and Bare (541) by turning off power within the switch temporarily while clearing the forwarding table. The motivation to combine the switch architecture of Tanoue into the modified system of Bare (624) and Bare (541) is that it provides an efficient fault recovery mechanism.

Response to Arguments

7. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection. Applicant has argued that the prior art previously cited fails to teach clearing all entries in the address table. The newly cited reference Bare (US 6,556,541 B1) teaches flushing the entire table (Bare (541), column 42, lines 8-17) in response to a link failure.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okanoue et al. (US 5,968,130), Burns et al. (US 6,147,965), Brown et al. (US 6,026,073) and Ashwood Smith et al. (US 2003/0112826 A1) are cited to show systems pertinent to applicant's invention.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

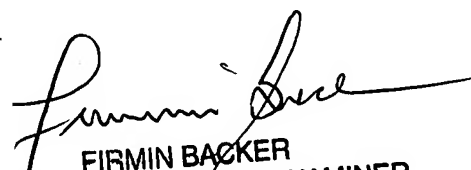
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farah Faroul whose telephone number is 571-270-1421. The examiner can normally be reached on Monday - Friday 6:30 AM - 4 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

F. Faroul


FIRMIN BACKER
SUPERVISORY PATENT EXAMINER